

INDIA'S COMPOSITION OF FOREIGN TRADE: BEFORE AND AFTER LIBERALISATION

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ABSTRACT

Foreign trade has played an increasingly important role in India's economic growth since independence. The present research paper is an attempt to evaluate India's composition of foreign trade during the period from 1970-71 to 2010-11. India's composition of foreign trade has undergone major changes after independence. India's economy in its earlier phase was agricultural economy so the majority of the exports included mainly agricultural related products like tea, tobacco, spices, cotton textiles and other raw materials etc. However with the industrialization of the economy, compositions of export have undergone changes. India now exports items such as engineering goods, chemicals and petroleum products. As far as imports are concerned, India's major requirement used to be food items and capital goods. With rapid industrialization, the composition of India's imports goods changed and petroleum products and mainly export related items were required to meet the developmental needs of our country. So in the present research study, an attempt has been made to examine the change in India's composition of foreign trade during post-liberalisation period (1990-91 to 2010-11) as compared to post-liberalisation period (1970-71 to 1990-91).

1. Introduction

India has a long history of trade relations with the rest of the world. India's trade is concerned with variety of goods since the trade relations were established with the rest of the world. The composition of foreign trades is concerned with both the import of goods as well as export of goods.

The majority of the exports at the time of independence included mainly agricultural related products like tea, tobacco, spices, cotton textiles and other raw materials etc., while, Indian imports were dominated by import of food items, capital goods, iron & steel and non-ferrous metal till end of the seventies, however, since the eighties, both petroleum products and capital goods have dominated in Indian imports. With increased pace of industrialization, the Indian export sector has undergone a dynamic change as the proportion of manufactured goods in exports has increased

while that of raw materials has decreased. The Indian export composition has further changed since the trade liberalisation reforms were initiated under which various trade promoting measures have been undertaken.

In the light of above background, this paper seeks to examine the trends in composition of India's exports and imports during the period from 1970-71 to 2010-11.

2. Methodology and Techniques of Analysis

The analysis of this paper is based on the data concerning to the composition of trade which includes composition of exports as well as imports. For this purpose, the data are collected from Handbook of Statistics on Indian Economy, RBI for the period 1970-71 to 2010-11. For examining the growth trend, a period corresponding to entire period as well as pre and post reform period has been considered.

The log-linear regression model has been used to estimate the annual compound growth rate (ACGR).

$$\ln X_t = \alpha + \beta t + u_t \quad \text{--- (1)}$$

Here annual compound growth rate = $(\exp. \beta - 1) * 100$

3. Trends in Export Composition

This section analyses the broad trends of composition of India's exports during 1970-71, 1980-81, 1990-91, 2000-2001 and 2010-11. The commoditywise composition of exports is analysed at two levels: at an aggregate and disaggregate level. At aggregate, the commodities are grouped into three major categories as primary products, manufactured products and petroleum products. Further all the remaining commodities with a very minimal individual percentage in the total exports are grouped under the head of others. At a more disaggregated level, each category of aggregate level are further categorised into sub groups. Accordingly, the primary products are sub-divided into two subcategories as - agricultural & allied products and ores & minerals, whereas the manufactured products are divided into seven sub-categories.

3.1 Export Analysis at Aggregate Level

The table 1 shows the percentage share of major commodity groups in total exports throughout the period from 1970 to 2011. The values are taken at an interval of 10 years. As depicted in the table, the share of primary products in total exports of India has decreased by more than one third from 45 percent in 1970-71 to 13.9 percent in 2010-11. Contrary to this, the share of both the manufacturing and petroleum products has increased from 52.9 percent and less than 1

percent in 1970-71 to 66.1 percent and 16.5 percent respectively in 2010-11.

It will be worthwhile to analyse the share of different commodities in total exports during pre and post-reform period so that any changes taken place from pre to post-liberalisation reforms may be identified. During pre-liberalisation period, the share of primary products has decreased from 45.9 percent in 1970-71 to 23.8 percent in 1990-91, whereas the share of manufactured products and petroleum products exhibited upward trends over the same period. The relative share of manufactured and petroleum products has increased significantly from 52.9 percent and 0.8 percent in 1970-71 to 71.6 percent and 2.9 percent respectively in 1990-91.

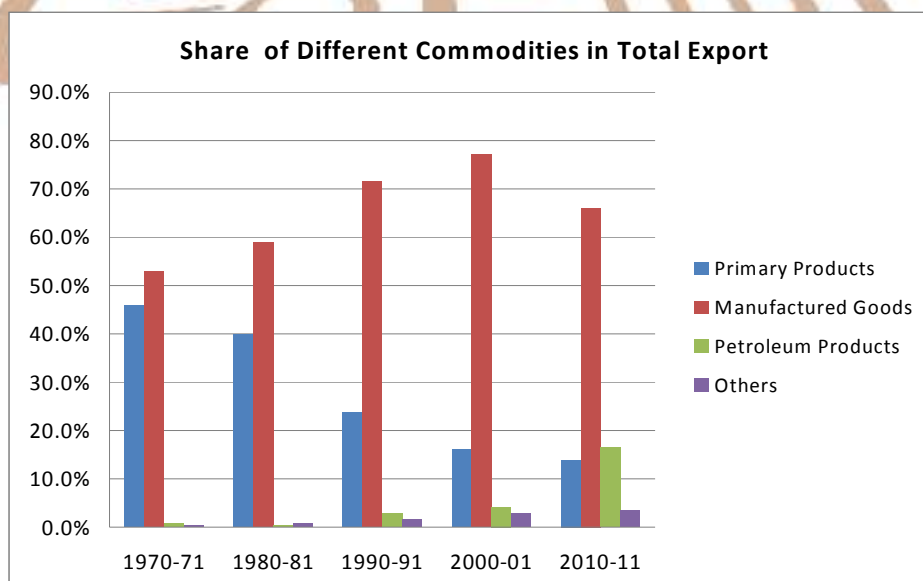
Table 1: Export Share

(in percentage)

Commodity Group /Year	1970-71	1980-81	1990-91	2000-01	2010-11
Primary Products	45.9	39.9	23.8	16	13.9
Manufactured Goods	52.9	58.9	71.6	77.1	66.1
Petroleum Products	0.8	0.4	2.9	4.2	16.5
Others	0.4	0.8	1.7	2.8	3.5

Source : Author’s calculation from Handbook of Statistics on Indian Economy, RBI, 2006 &2011.

Figure: 1



During post-reform period from 1990-91 to 2010-11 as depicted in the table 1, the share of primary products in total exports plummeted consistently from 23.8 percent in 1990-91 to 13.9 percent in 2010-11. Whereas, the share of manufacturing products has increased from 71.6 percent in 1990-91 to 77.1 percent in 2000-01 thereafter, it has declined to 66.1 percent in 2010-11. Moreover, the share of exports of petroleum products went up sharply from 2.9 percent in 1990-91 to 16.5 percent in 2010-11. The major increment in the percentage share was noticed between the periods 2000-01 and 2010-11 i.e., during this period, it rose from 4.2 percent to 16.5 percent. This is because of rise in the export capacity of domestic refineries and to some extent, due to rise in petroleum prices.

Table 2: India's Principal Exports

Classification	Pre-Liberalisation period	Post-Liberalisation period	Entire period
	1970-71 to 1990-91	1991-92 to 2010-11	1970-71 to 2010-11
	ACGR	ACGR	ACGR
Primary Products	6.5	11.4	7.5
Manufactured Goods	11.8	13.5	12.1
Petroleum Products	24.5	34.8	18.1

Source: Author's calculation from Handbook of Statistics on Indian Economy, RBI, 2006 & 2011

The figures presented in table 2 depicts that the growth rate of export of primary products has been more (11.4 percent) during the post-liberalisation period as compared to the pre-liberalisation period (6.5 percent).

The annual compound growth rate of manufactured goods tells that, it has increased slightly from 11.8 percent during pre-liberalisation period to 13.5 percent during post liberalisation period.

The export of petroleum products has registered significant growth rate during both the pre and post liberalisation period; however, its export has increased on the average by 34.8 percent per year during post-reform period compared to 24.5 percent per year during pre-reform period.

The export of petroleum products has registered the highest growth rate (18.1 percent), followed by manufactured products (12.1 percent) and primary products (7.5 percent), when the annual compound growth rate is estimated for the entire period.

3.2 Export Analysis at Disaggregate Level

This sub section analyses the trends of export of primary and manufacturing products at disaggregate levels.

3.2.1: Export of Primary Products

The export of primary products includes agricultural & allied products and ores & minerals. Further, the agricultural products include Tea, Coffee, Cotton Raw including Waste, Tobacco, Spices, Oil Meals, Fruits and Vegetables (Including cashew), Marine Products, Sugar and Sugar Preparations, Meat and Meat Preparations, Processed Fruits, Juices, Miscellaneous Processed Items and others.

As depicted in the table 3, during the period from 1970-71 to 2010-11, the share of agricultural products in total exports of India (in terms of percentage) has continuously decreased from 35.5 percent to 9.7 percent respectively. This is because, the export of traditional items among agricultural products especially tea, coffee and tobacco has fallen significantly during the period under analysis. Tea and coffee were the major agricultural export items before liberalisation period but thereafter, the trend has changed, e.g., during the entire period from 1970-71 to 2010-11, the combined share of both tea and coffee in total agricultural exports has decreased substantially from 11.3 percent to 0.6 percent respectively.

Table 3: Export of Primary Products (In Percentage)

Commodity / Year	1970-71	1980-81	1990-91	2000-01	2010-11
A. Agriculture and Allied Products	35.5	32.7	18.5	13.4	9.7
1. Tea	9.7	6.3	3.3	0.9	0.3
2. Coffee	1.6	3.2	0.8	0.6	0.3
3. Cotton Raw including Waste	-	-	2.6	0.1	1.1
4. Tobacco	2.0	1.9	0.8	0.4	0.3
5. Spices	2.5	1.7	0.7	0.8	0.7
6. Oil Meals	3.8	2.4	1.9	1.0	0.9
7. Fruits and Vegetables(Including cashew)	4.0	3.3	2.0	1.4	0.6
8. Marine Products	2.0	3.2	2.9	3.1	1.0
9. Sugar and Sugar Preparations	1.9	0.6	0.1	0.2	1.0
10. Meat and Meat Preparations	-	-	0.4	0.7	0.8
11. Processed Fruits, Juices, Miscellaneous Processed Items			0.7	3.0	1.4
12. Others	7.8	10.2	2.3	1.1	1.3
B. Ores and Minerals	9.6	4.7	5.3	2.6	4.2

Source: Author's calculation from Handbook of Statistics on Indian Economy, RBI, 2006 &2011.

However, among the export of agricultural products, the share of Fruits and Vegetables (including cashew), Oil Meals, Spices, and Marine Products have found consistent throughout the period under analysis.

It is important to mention that the export share of all the products of agricultural items has fallen noticeably except few exceptions (e.g., Processed Fruits, Juices, Miscellaneous Processed Items and Meat and Meat Preparations) during the period under analysis. However, the export items like meat products, cotton raw material and processed fruits have gained popularity since liberalisation.

The share of ores and minerals in total exports of India (in terms of percentage) has decreased from 9.6 percent to 4.2 percent during the period under study, but its percentage share has increased from 2.6 percent in 2000-01 to 4.2 percent in 2010-11.

3.2.2: Export of Manufacturing Products

The export of manufacturing products includes Leather and Manufactures, Chemicals and Related Products, Engineering Goods, Textile & Textile products, Gems and Jewellery, Handicrafts excluding carpets and Other Manufacturing Goods. From the table 4, it is observed that the composition of the manufacturing export has changed over the period.

During pre-liberalisation period from 1970-71 to 1990-91, the share of leather and manufactures in India's total export has increased from 4.7 percent to 8.0 percent respectively. Whereas, the post-reform period has revealed the contrary trends as the share of these products has decreased consistently from 8.0 percent in 1990-91 to 1.5 percent in 2010-11.

The share of textile has been consistently ranged between 20 and 25 percent till 2000-01, thereafter; it has fallen to less than 10 per cent of total exports in 2010-11. Among textile and textile products, jute manufactures were prominent manufactured item of export in 1970-71 which accounted 12.3 percent of total exports. However, with the emergence of substitutes for jute goods in the international market and the decline in the production of jute domestically, the share of jute goods has decreased continuously. In 1990-91, the share of jute manufactures was accounted for hardly 1 percent, thereafter it has declined to 0.2 percent in 2010-11. During the period from 1970-71 to 2000-01, the share of Ready-made garments has increased from 2 percent to 12.5 percent respectively, thereafter, it has decreased to 4.4 percent in 2010-11.

Commodity / Year	1970-71	1980-81	1990-91	2000-01	2010-11
A. Leather and Manufactures	4.7	5.0	8.0	4.4	1.5
B. Chemicals and Related Products	2.4	3.5	9.5	13.2	11.4
C. Engineering Goods	13.1	11.6	12.4	15.3	27.0
D. Textile and textile products	22.4	22.6	23.0	24.3	8.8
a. Cotton Yarn, Fabrics, Madeups, etc.	7.4	6.8	6.4	7.8	2.1
b. Manmade Yarn, Fabrics, Madeups, etc.			1.2	2.4	1.6
c. Readymade Garments	2.0	8.4	12.3	12.5	4.4
d. Jute and Jute Manufactures	12.3	4.9	0.9	0.3	0.2
e. Carpets	0.7	2.4	2.1	1.3	0.4
E. Gems and Jewellery	2.7	9.0	16.1	16.6	16.0
F. Handicrafts excluding carpets			1.2	1.5	0.1
G. Other Manufactured Goods	8.6	9.8	1.4	1.8	1.3

Source: Author's calculation from Handbook of Statistics on Indian Economy, RBI, 2006 & 2011.

It is evident from the table 4 that the main drivers of export growth of manufactured products are mainly engineering goods, chemicals & related products and gems & jewellery. During pre-liberalisation period from 1970-71 to 1990-91, the share of engineering goods has decreased slightly from 13.1 percent to 12.4 percent respectively, on the contrary, the share of these goods has showed the most remarkable increase during post-liberalisation period. The share of engineering goods in total exports has increased from 12.4 percent in 1990-91 to 27 percent (i.e. more than one-fourth of total exports) in 2010-11, i.e. it has registered almost 100% increment. Throughout the period from 1990-91 to 2000-01, engineering goods have occupied the second position in India's export earnings after gems and jewellery; thereafter the export of engineering goods have reached at the first place in 2010-11. The rapid expansion in exports of engineering goods, propelled by technology-intensive items such as automobiles and iron and steel represents an indication of the technological improvement and the growing competitiveness of Indian manufacturing. Moreover, the share of chemical and related products in total exports has increased from 2.4 percent in 1970-71 to 13.2 percent in 2000-01; thereafter it has decreased to 11.4 percent in 2010-11.

Furthermore, it is observed that the share of gem and jewellery industry has increased drastically from 2.7 percent in 1970-71 to 16.1 percent in 1990-91, benefiting from the promotional measures announced in different Exim policies, although since liberalisation, its contribution has been remained same as around 16 percent.

4. Trends in Composition of Imports

This section analyses the broad trends of composition of India's imports during 1970-71, 1980-81, 1990-91, 2000-2001 and 2010-11. The commoditywise composition of import is analysed at two levels: at an aggregate and disaggregate levels. At aggregate, the classification of commodities is made into five major categories as Petroleum, Crude & Products, Food and Related Products, Capital Goods, Mainly Export Related Items and other items. At a more disaggregated level, three categories of aggregate level are further categorised into sub groups.

4.1 Analysis of Composition of Imports - Aggregate Level

The table 5 and figure 2 show the percentage share of major commodity groups in total imports throughout the period from 1970-71 to 2010-11. The values of major commodities are taken at interval of 10 years.

As depicted in the table, the share of petroleum, crude and products in total imports rose sharply from 8.3 percent in 1970-71 to 30 percent in 2010-11 i.e. the share has increased by more than three times. Similarly, the share of mainly export related items has also risen from 7.9 percent to 14.1 percent over the period under analysis. Contrary to this, the share of food and related products has plunged significantly from 14.4 percent to 2.3 percent during the period from 1970-71 to 2010-11 respectively; likewise, the share of capital goods has also declined from 24.7 percent to 20.3 percent during the same period.

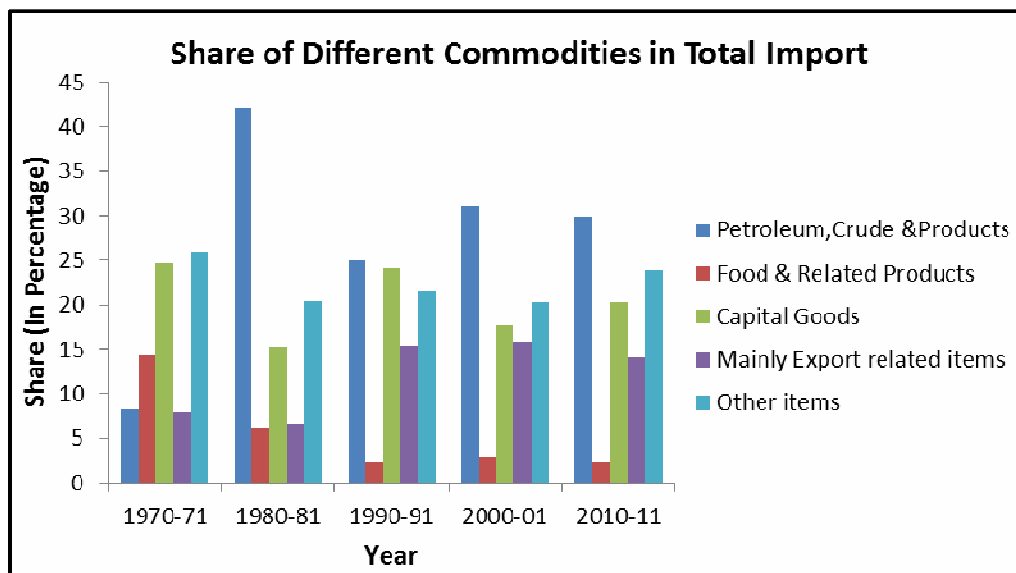
Table 5: Share of Major Commodity Groups in Imports

(In Percentage)

Commodity Group/Year	1970-71	1980-81	1990-91	2000-01	2010-11
Petroleum, crude & Products	8.3	42.2	25	31	30
Food & Related Products	14.4	6.2	2.3	2.8	2.3
Capital Goods	24.7	15.2	24.2	17.7	20.3
Mainly Export related items	7.9	6.7	15.3	15.9	14.1
Other items	25.9	20.5	21.5	20.3	23.9

Source: Author's calculation from Handbook of Statistics on Indian Economy, RBI, 2006 & 2011.

Figure 2



Source: Table 5.

Almost similar pattern is also revealed when analysis is made during pre-liberalisation era. The pre-liberalisation period for petroleum, crude and products was hap hazard in nature in which its percentage share has increased drastically from 8.3 percent in 1970-71 to 42.2 percent in 1980-81. Such a sharp rise is attributed to two hikes in oil prices first in the 1973-74 and the second in 1978-89. During the eighties, on the one hand, India has succeeded to increase domestic oil production while on the other hand international oil prices have fallen. As a result, the share of POL imports bill in the total import expenditure has declined to 25 per cent in 1990-91.

Further, on one side, the share of mainly export related items has increased continuously from 7.9 percent to 15.3 percent during the period from 1970-71 to 1990-91; whereas, on the other side, the share of food and related products has exhibited downward trends as the relative share of these products has declined from 14.4 percent to 2.3 percent over the same period. Moreover, the share of capital goods has been remained same as 24 percent during the period under analysis.

During the post-liberalisation period from 1990-91 to 2010-11, the share of petroleum, crude & products and food & related products has been constant at around 30 percent and 2 percent respectively. Furthermore, the share of capital goods and mainly export related items has plummeted slightly from 24.2 percent and 15.3 percent in 1990-91 to 20.3 percent and 14.1 percent respectively in 2010-11.

It is apparent from the above analysis that during the pre-reform period, there has been a shift in the goods composition of major items of import. The share of food and related items in total imports has declined

remarkably while the share of petroleum, crude & products and mainly export related items in total import expenditure has increased over the years. Further, no significant changes have been observed regarding the composition of import during post-liberalisation era. POL continues to be the single major item of import followed by capital goods and mainly export related items.

Table 6 presents the growth rates of major import products as categorised in table 5 for the entire period and as well as for both the pre and post-liberalisation periods.

Table 6: India's Principal Imports

(Value in percentage)

Classification	Pre-Liberalisation period	Post-Liberalisation period	Entire period
	1970-71 to 1990-91	1991-92 to 2010-11	1970-71 to 2010-11
	ACGR	ACGR	ACGR
Petroleum, crude and Products	14.9	18.8	12.6
Food and Related Products	3.8	17.1	5.8
Capital Goods	12.9	16.6	11.8
Mainly Export Related Items	17.8	13.4	13.3

Source: Author's calculation from Handbook of Statistics on Indian Economy, RBI, 2006 &2011.

As given in table 6, the growth rates for petroleum, crude & products, food & related products and capital goods have increased more during the post-reform period compared to the pre-reform period, except mainly export related items.

During the pre-liberalisation period, import of petroleum products has increased on average by 14.9 percent per year; whereas, the import of these products has increased by 18.8 percent per year; however, the import of these products has increased by 12.6 percent per annum during the entire period. Likewise, the capital goods have increased on the average by 12.9 percent during the pre-reform period by 16.6 percent per year during the post-reform period (table 6).

Regarding the growth rates of the food and related products, it is observed that the growth rates of these products have increased significantly during the post-reform period. It is clear from the table 6 that the growth rate of these products has increased on the average by 3.8 percent per year during the pre-liberalisation period and increased on the average by to 17.1 percent per year during the post-liberalisation period.

On the other hand, the export related items has registered fall down in their growth rate during the post-reform period. The growth rate of these items has declined from the annual compound rate of growth of 17.8 percent during the pre-reform period to 13.4 percent annual compound growth rate during post liberalisation period. However, the import of these products has increased on the average by 5.8 percent per year over the entire period (table 6).

4.2 Composition of Imports - Disaggregate Level

This sub section analyses the trends of imports of food & related products, mainly export related items and other items at disaggregate levels. The food and related products include cereals & cereals preparation, edible oils and pulses; whereas, import of mainly export related items includes precious and semi-precious stones, organic and inorganic chemicals, textile fabrics and cashew nuts. The import of precious and semi-precious stones is done mainly as a raw material for the gems and jewellery industry.

The import share of food and related items has decreased significantly from 14.4 percent in 1970-71 to 2.3 percent in 2010-11 due to noticeable fall in the share of import of cereals and cereal preparations from 13 percent to almost negligible during the same period (table 7). In contrary to this, the import share of mainly export related items has increased in significant percentage from 7.9 percent to 14.1 percent during the period from 1970-71 to 2010-11 respectively. This significant increment in the relative share is mainly due to substantial increase in the import share of pearls, precious and semi-precious stones from 1.5 percent to 8.9 percent during the same period (table 7).

Table 7: Share of Imports

(Share in percent)

Commodity / Year	1970- 71	1980-81	1990-91	2000-01	2010-11
Food & Related products	14.4	6.2	2.3	2.8	2.3
1. Cereals and Cereal Preparations	13.0	0.8	0.4	0.0	0.0
2. Edible Oils	1.4	5.4	0.8	2.6	1.8
3. Pulses	-*	-*	1.1	0.2	0.4
Mainly Export Related Items	7.9	6.7	15.3	15.9	14.1
1. Pearls, Precious and Semi-Precious Stones	1.5	3.3	8.7	9.5	8.9
2. Organic and Inorganic Chemicals	4.2	2.9	5.3	4.8	4.2
3. Textile Yarn, Fabrics, Made-Ups, etc.	0.5	0.5	1.0	1.2	0.9
4. Cashew Nuts	1.8	0.1	0.3	0.4	0.9

Source: Calculated from Handbook of Statistics on Indian Economy, RBI, 2006 & 2011.

-*represent lack of data.

The import of other items includes fertilizers, non-ferrous metals, paper & paper products, ores and scrap metals, iron and steel, medicinal & pharmaceutical products, gold, scientific instruments, coal, coke and briquettes etc. Among other items, fertilisers, non-ferrous metals and iron and steel were the major import items before liberalisation period but thereafter, the trend has changed significantly due to increase in indigenous production of these items, as a result, import of these items did not remain major part of Indian imports during post-liberalisation period. Accordingly the relative share of fertilisers, non-ferrous metals and iron and steel has declined significantly from 5.9 percent, 7.3 percent and 9.0 percent in 1970-71 to 2.0 percent, 1.1 percent and 2.9 percent respectively in 2010-11 (table 8).

Table 8: Import of Others Items

(In Percentage)

Commodity / Year	1970-71	1980-81	1990-91	2000- 01	2010- 11
1. Fertilisers	5.9	6.9	4.1	1.5	2.0
2. Non-Ferrous Metals	7.3	3.8	2.6	1.1	1.1
3. Paper, Paper Boards, Manufactures including News Prints	1.5	1.5	1.1	0.9	0.6
4. Metalliferous Ores, Metal Scrap, etc.	0.7	0.9	3.5	1.5	2.7
5. Iron and Steel	9.0	6.8	4.9	1.5	2.9
6. Gold	-*	-*	-*	8.2	9.6
7. Professional, Scientific Controlling Instruments, Photographic Optical Goods	-*	-*	2.5	1.7	1.1
8. Coal, Coke and Briquettes, etc.	-*	-*	1.8	2.2	2.7
9. Medicinal and Pharmaceutical Products	1.5	0.7	1.1	0.7	0.7

Source: Calculated from Handbook of Statistics on Indian Economy, RBI, 2006 &2011.

Note- * represent lack of data.

Contrary to the above, import of gold, scientific instruments, coal, coke and briquettes etc., were not major part of imported items during pre-liberalisation period. But after liberalisation, the demand of these items except scientific instruments has increased; therefore, the import of these items has become important part of Indian imports. Particularly, gold has formed an important part since 1997-98 with the removal of the ban on the import of gold. Accordingly its share has increased from 8.2 percent in 2000-01 to 9.6 percent in 2010-11.

Import of coal, coke and briquettes has not made any significant increment as the import share of these products has increased from 1.8 percent in 1990-91 to 2.7 percent in 2010-11. Similarly, the import of remaining items such as paper and paper product, ores and scrap and medicinal and pharmaceutical products has not contributed significantly in the import of other items.

Conclusions

Liberalisation and trade reform initiated since 1991 have led to a significant change in the trends of the export composition basket of India. Over the period under analysis, India's export composition has changed significantly from primary products & few industrial products i.e. textiles etc. to the export of diversified manufactured and petroleum products. Thus, India has emerged as an important exporter of diversified manufactured & petroleum products. The Government's efforts towards encouragement of Free Trade Zones, Duty Exemption Entitlement Scheme and Focus Product Scheme (FPS) have contributed to the diversification of exports in terms of products from labour intensive manufactures to higher value-added engineering and petroleum products.

Overall, like the change in the composition of export products, India's import composition of goods has also registered a significant shift. For example, the import share of food & related items, fertilisers, non-ferrous metal and iron & steel in total imports has declined while the share of petroleum, crude & products, gold and precious & semi precious stones in total import expenditure have increased over the period under analysis. At present, capital goods like machinery & equipment, petroleum oil lubricants (POL), gold and precious & semi precious stones are accounted around 70 percent of total import expenditure.

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